

ЗАДАЧА 5. РАСЧЕТ СЛОЖНОЙ ЦЕПИ ПЕРЕМЕННОГО ТОКА

Определить действующие и мгновенные значения напряжений и токов всех участков цепи. Составить баланс мощностей. Построить потенциальную диаграмму.

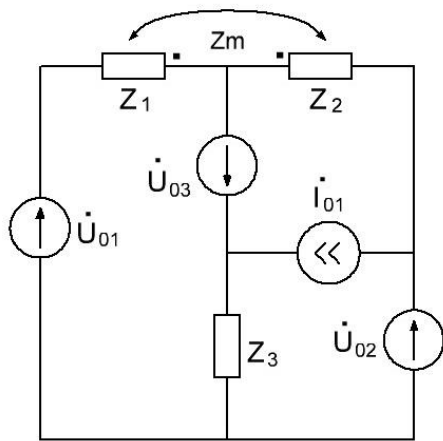
$Z_m = j40$ Ом (для 1-15 вариантов)

$Z_m = j4$ Ом (для 16-30 вариантов)

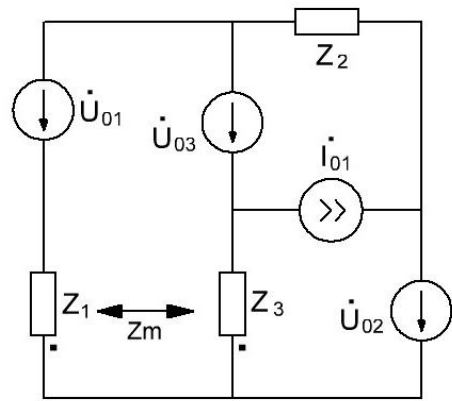
Таблица вариантов

Варианты	Z1	Z2	Z3	\dot{U}_{01}	\dot{U}_{02}	\dot{U}_{03}	i_{01}	i_{02}
	Ом	Ом	Ом	В	В	В	А	А
1	2	3	4	5	6	7	8	9
1	40+j80	40+j40	-j40	j40	40-j40	-40-j40	1	-
2	40+j80	-j40	40+j40	40+j40	-j80	40	-2	-
3	-j40	40+j80	40+j40	200-j120	-80-j40	-	-1	-
4	40+j80	40+j40	-j40	-80+j240	-40+j40	-	-2	j2
5	-j40	40+j80	40+j40	j40	j80	j160	-	1
6	40+j40	40+j80	-j40	40	-	-j120	-	2-j
7	40+j40	40+j80	-j40	-80-j120	160	-j160	1-j2	-
8	40+j80	40+j40	-j40	320	160-j320	-160-j160	j3	-j5
9	40+j40	-j80	40+j80	-j200	160+j160	-40-j400	9+j9	j9
10	-j40	40+j40	40+j80	200+j200	400	200+j200	10	-
11	40+j80	40+j40	-j40	400+j760	j360	-	-9	-
12	40+j40	-j80	40+j80	160	-	160+j800	1	3
13	40+j40	40+j80	-j80	-	-200-j720	320+j520	5	-
14	40+j80	40+j40	-j80	-	40-j600	-	2	-
15	40+j40	-j40	40+j40	280-j80	-	-	j5	1+j5
16	-j8	4+j4	4+j8	12-j20	28+j156	12-j20	10-j6	-
17	4+j8	4+j4	j4	80+j28	-36+j56	16	3+j4	6+j8
18	4+j8	-j4	4+j4	-40-j40	16-j56	-	-	j8
19	-j4	4+j8	4+j4	40+j116	4+j40	-	-19	-
20	4+j8	4+j4	j4	40	-20-j100	-	4-j4	6-j6
21	4+j4	4+j8	j4	-	68+j164	80+j84	1	20
22	4+j8	4+j4	-j4	20-j20	-j48	20-j20	-	22-j10
23	4+j8	4+j4	j4	80+j200	-	40+j68	3	-
24	4+j4	4+j8	-j4	-	52-j28	-	j20	j10
25	4+j8	-j4	4+j4	-	-	-68+j96	-	-3-j4
26	4+j8	4+j4	j4	40+j144	80-j16	-	-	6
27	4+j4	-j4	4+j8	-	-72-j12	132-j156	-	3
28	4+j8	-j4	4+j4	j28	48-j36	j20	-	4
29	4+j8	4+j4	j4	-j116	-112+j80	40+j40	-	9
30	4+j8	j4	4+j4	-80-j80	-j120	20+j200	10	-

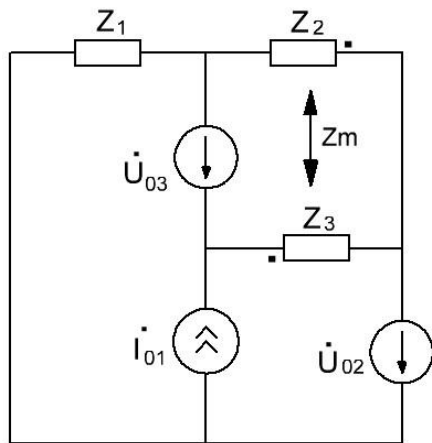
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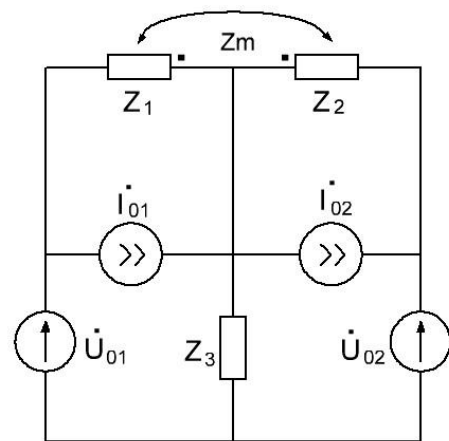
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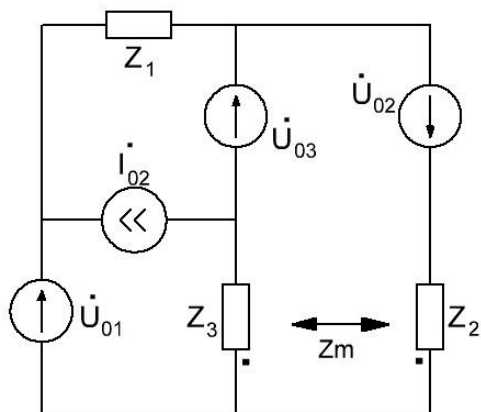
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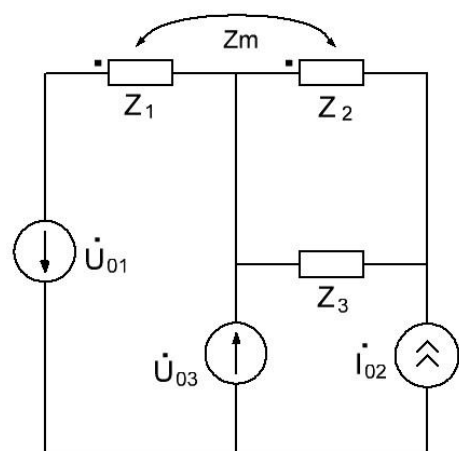
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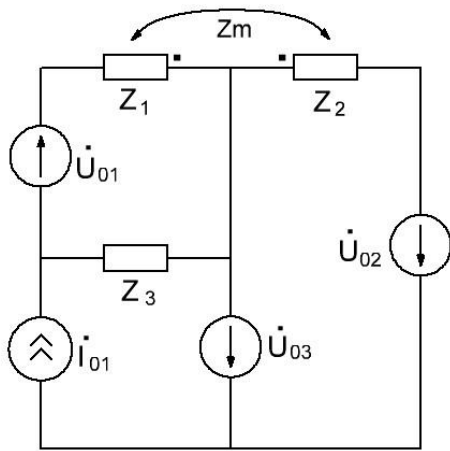
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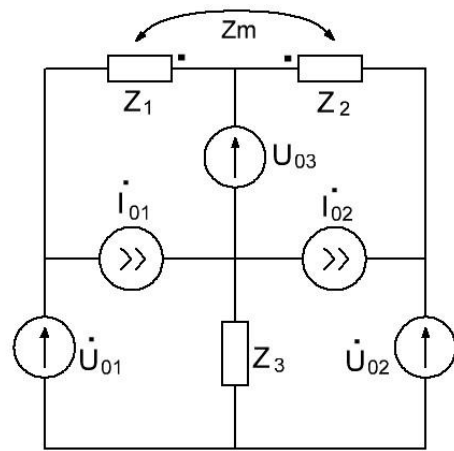
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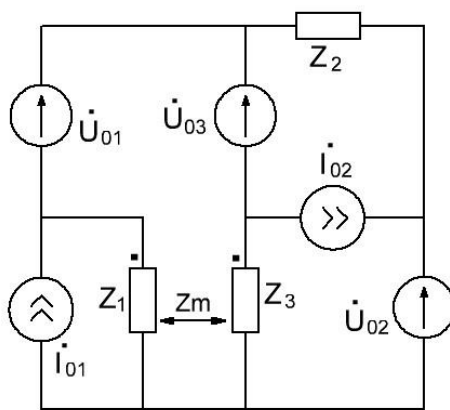
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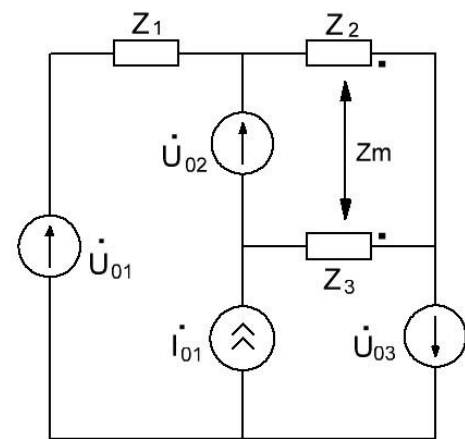
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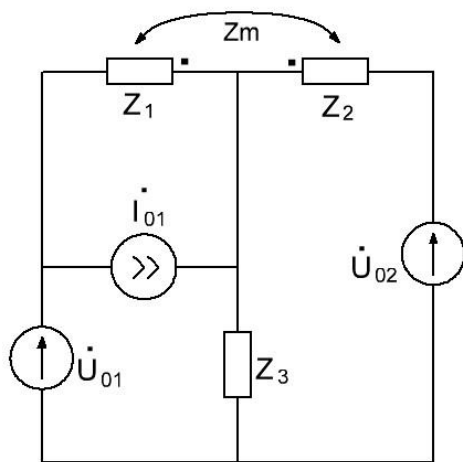
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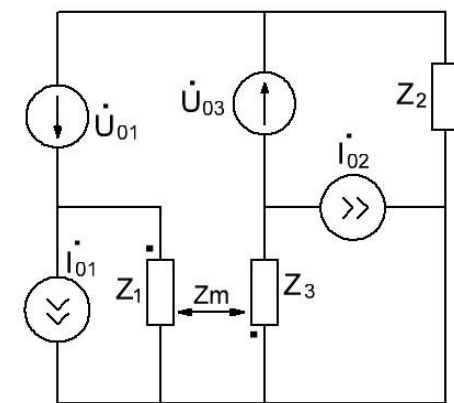
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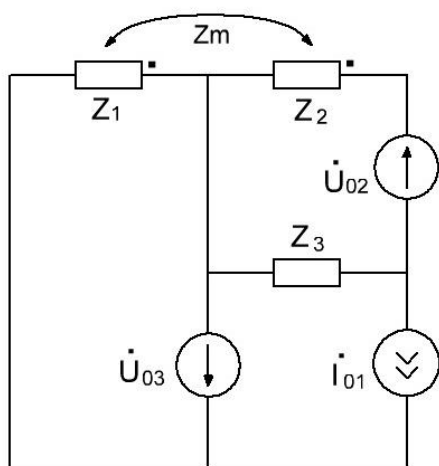
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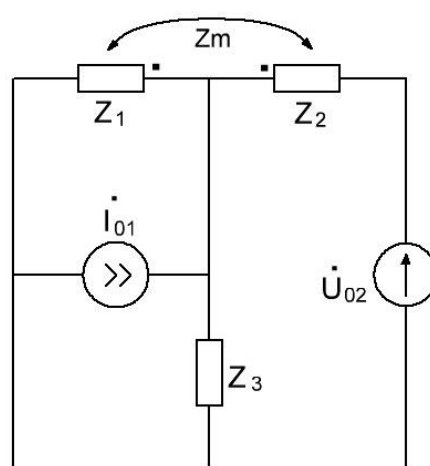
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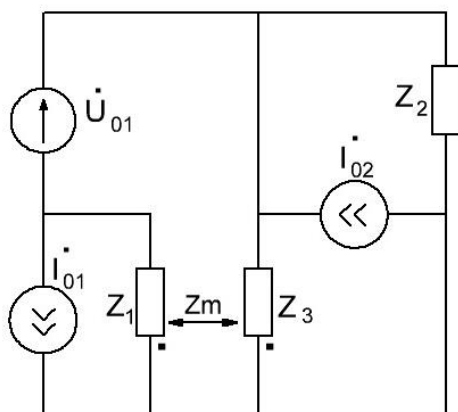
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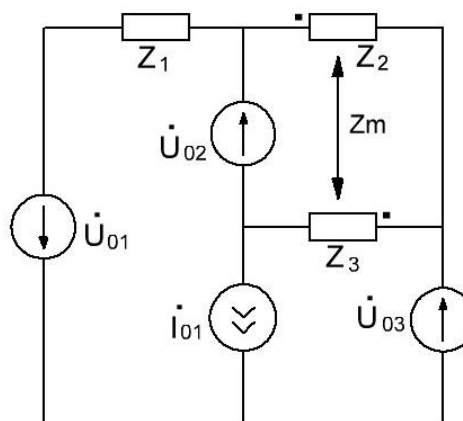
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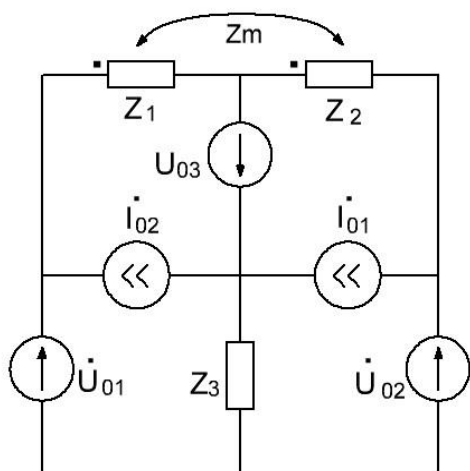
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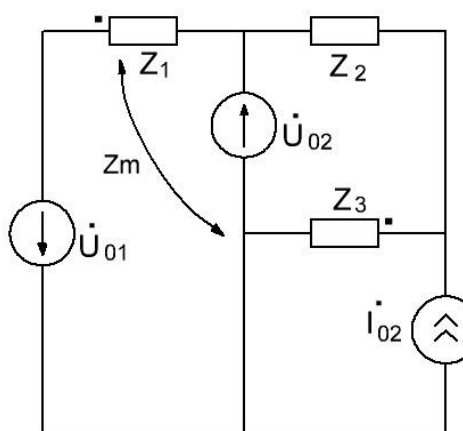
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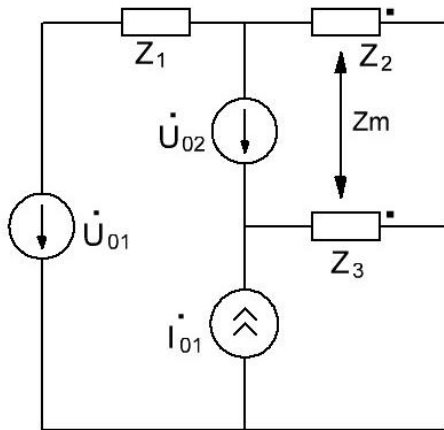
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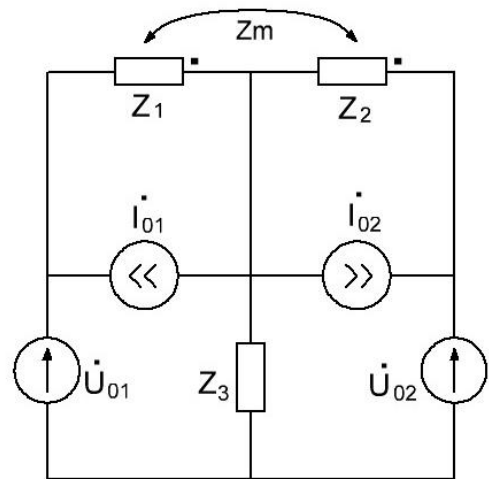
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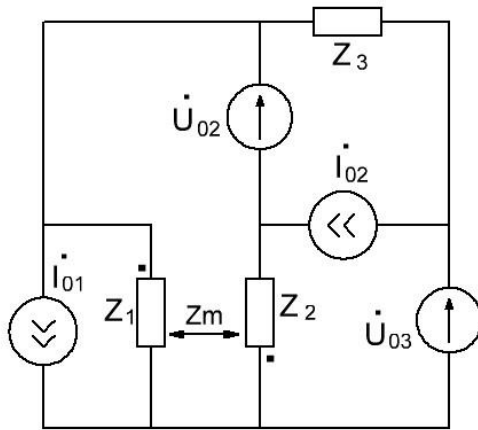
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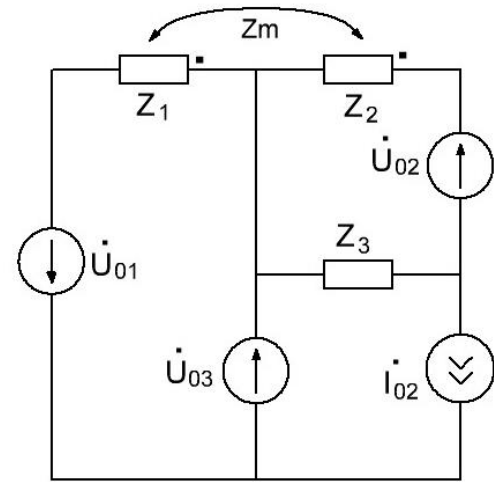
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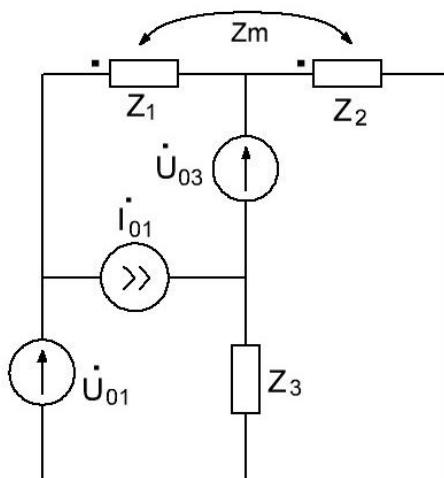
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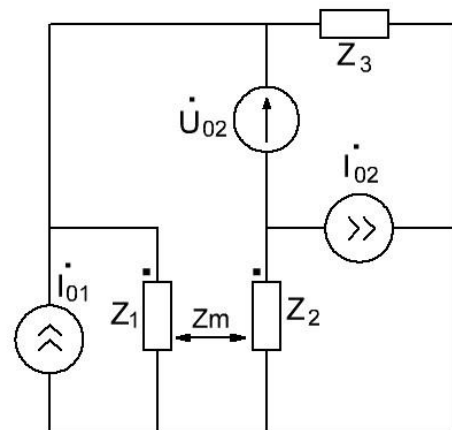
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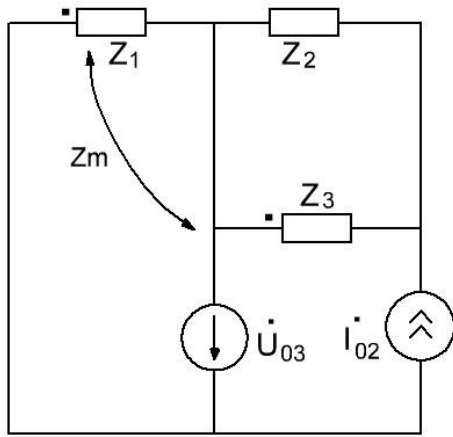
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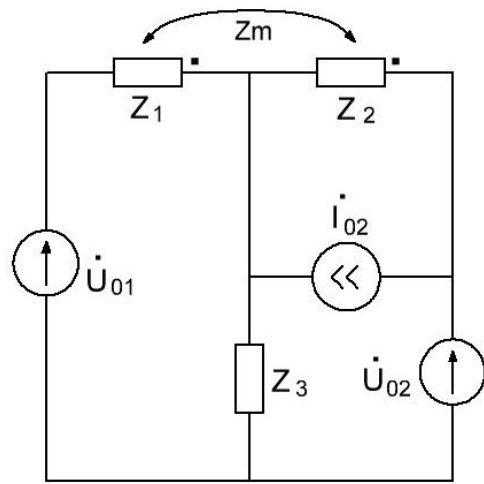
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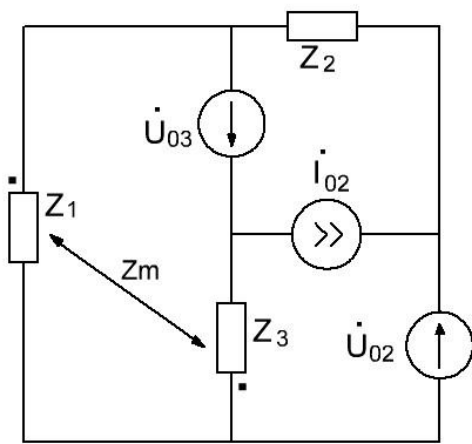
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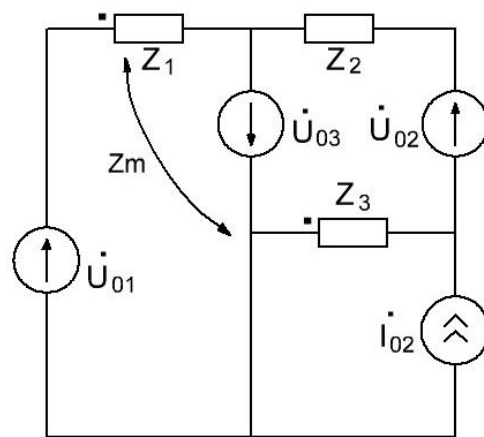
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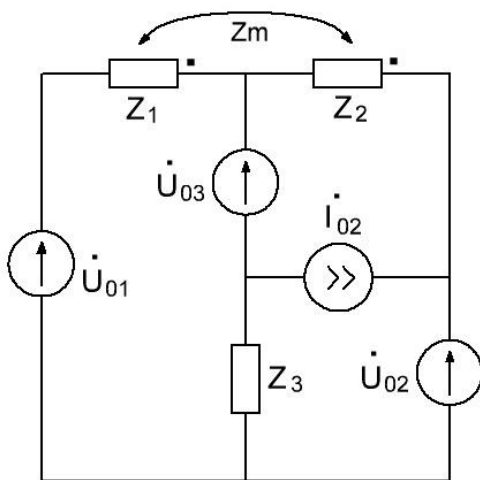
27.



28.



29.



30.

